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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,832	02/13/2002	Timothy L. Kelliher	010402-01	6341
39368	7590	05/04/2004	EXAMINER	
SKYMOON RESEARCH & DEVELOPMENT 3045 PARK BLVD. PALO ALTO, CA 94306			TSE, YOUNG TOI	
			ART UNIT	PAPER NUMBER
			2634	7

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/074,832	KELLIHER, TIMOTHY L.
	<b>Examiner</b>	<b>Art Unit</b>
	YOUNG T. TSE	2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 13 February 2002.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) 1,2 and 11-15 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 3-10 and 16-18 is/are rejected.  
7)  Claim(s) 19 is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All    b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. \_\_\_\_.  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/6. 5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1 and 2, drawn to a method of requesting and sending data in a DSL network, classified in class 375, subclass 377.
  - II. Claims 3-19, drawn to a method or system for oversubscribing DSL modems and OAM/EOC modems, classified in class 375, subclass 222.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions Group I and Group II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because Group I requires a request to send and receive data from a transmitter or a receiver of the DSL modem, however, Group II requires connections between DSL modems or OAM/EOC modems and customer premise equipment devices by a switch. The subcombination has separate utility such as Group II does not require a request to send and receive data from a transmitter or a receiver of the DSL modem while Group I does not require the connections between DSL modems or OAM/EOC modems and customer premise equipment devices by a switch.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. This application contains claims directed to the following patentably distinct species of the claimed invention:

Figure 2 (claims 3-10 and 16-19) is directly related to a first embodiment of a system for oversubscribing a pool of modems;

Figure 6 (claims 11 and 16-18) is directly related to a second embodiment of a system for oversubscribing a pool of modems;

Figure 7 (claims 12 and 16-18) is directly related to a third embodiment of a system for oversubscribing a pool of modems;

Figure 8 (claims 13 and 16-18) is directly related to a fourth embodiment of a system for oversubscribing a pool of modems;

Figure 9 (claims 14 and 16-18) is directly related to a fifth embodiment of a system for oversubscribing a pool of modems; and

Figure 10 (claims 15 and 16-18) is directly related to a sixth embodiment of a system for oversubscribing a pool of modems.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims

readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

5. During a telephone conversation with Michael D. Van Loy on 23 April 2004 a provisional election was made without traverse to prosecute the invention of Figure 2, claims 3-10 and 16-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-2 and 11-15 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Objections***

6. Claims 4-8, 10, and 16-19 are objected to because of the following informalities: in line 1 of claims 4-8, "invention" should be – method --; in claim 4, line 7, "devices wherein" should be – devices, wherein --; in claim 10, line 1, "invention" should be – system --; in line 1 of claims 16-18, "invention of claims 9, 11, 12, 13, 14, or 15" should be – system of claim 9, --; in claim 17, line 4, "coaxial cable" should be – a coaxial cable --; and in claim 19, line 2, "a DSL modem" should be – a DSL modem and an OAM/EOC modem -- and lines 4-5, 6-7, 9-10, and 11, "a DSL modem", "an OAM/EOC modem", and "a Time-Out" should be – the DSL modem --, -- the OAM/EOC modem --, and -- the Time-Out --, respectively. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 3-10 and 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites a method and claim 9 recites a system for oversubscribing a DSL modem, however, the body of claims 3 and 9 recites M DSL modems and P OAM/EOC modems.

Wherein claims 4-8 and 16-18 are directly or indirectly depended upon claim 3.

In claim 10, lines 2-3, Applicant is request to clarify the phrase "... between the respective customer premise equipment devices and said M DSL modem and said P OAM/EOC modems" and the term "said M DSL modem" lacks antecedent basis since claim 9 recites M DSL modems.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 9-10 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Busch.

Busch (US patent No. 3,676,846) discloses an apparatus and method in Figure 1 for transmitting data on a time-shared basis between a plurality of low-speed sources and a high-speed source over a communication circuit.

Referring to Figure 1, the communication circuit comprises a low speed asynchronous transmission path including I/O terminals 101, a telephone switching circuit 115, low speed modems 107, a telephone interface 109, a serial line multiplexer 117, and a peripheral computer 119 and a high speed synchronous transmission path including a central computer 123, high speed modems 125 and 127, and the peripheral computer 119.

With respect to claim 9, the high speed modems 125 and 127 correspond to the M DSL modems, the low speed modems 107 correspond to the P OAM/EOC modems, and, the telephone switching circuit 115 corresponds to the switch connected to the downstream data links of the I/O terminals 101.

With respect to claim 10, it is well known in a telecommunications system to provide RTS/CTS signals for communication between a customer premise equipment device(s) and a modem(s).

With respect to claims 16 and 17, it is also well known in a telecommunications system that the transmission lines (upstream or downstream) connected between a customer premise equipment device(s) and a modem(s) are POTS lines, twisted pair conductors, DSL lines, or coaxial cables.

### ***Double Patenting***

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 3-4, 8-10 and 19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 4-6, 14 and 35 of copending Application No. 10/159,496. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 3, 9 and 19 of the instant application do not include the limitation(s) of configuring via a communication bus at least one programmable signal processor as M high speed data modem and N low bandwidth synchronization modems as recited in claims 1, 14 and 35 of copending Application No. 10/159,496. Obviously, as recited in claims 3, 9 and 19 of the instant application, the M DSL modems are high speed modems and the P OAM/EOC modems are consider as low bandwidth synchronization modems because the P OAM/EOC modems are used to synchronized data between customer premise equipment devices and other modems. Although the conflicting claims (3, 9, and 19) are not identical, they are not patentably distinct from each other because the broader claims of the instant application would have been obvious in view of the narrow issued claims of the copending Application No. 10/159,496.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### ***Allowable Subject Matter***

13. Claims 3-8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

14. Claim 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

15. Claim 19 would be allowable if rewritten or amended to overcome the objection(s) set forth in this Office action.

16. The following is a statement of reasons for the indication of allowable subject matter: Long et al. and Cohen et al. are related to a DSL communication system comprising high speed modems for communication with other modems over high frequency customer premises and low speed modems for communication with modems over low frequency POTS. However, the prior art fails to show or suggest the communications of transferring user traffic data between DSL modems and a set of customer premises equipment devices and transferring synchronization data between OAM/EOC modems and another set of customer premises equipment devices by a switch or multiplexer circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Young Tse** whose telephone number is **(703) 305-4736**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at **(703) 305-4714**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
P.O. Box 1450

Alexandria, VA 22313-1450

**or faxed to:**

**(703) 872-9306**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

*Young Sr*  
Young T. Tse  
Primary Examiner  
4/29/04